CLAIMS

What is claimed is:

1. A method comprising:

receiving a first request to perform a write operation on one of a plurality of multi-master data stores, wherein the one of the plurality of multi-master data stores is undetermined, and wherein the first request includes an optimization technique identifier;

creating a second request, wherein the second request requests performance of the write operation;

determining the one of the plurality of multi-master data stores to which the second request will be transmitted, and wherein the determining includes using an optimization technique associated with the optimization technique identifier; and

transmitting the second request to the one of the plurality of multi-master data stores.

2. The method of claim 1, wherein each of the plurality of multi-master data stores is a directory server.

3. The method of claim 1, wherein the first request includes code of the Directory Services Markup Language.

4. The method of claim 1, wherein the second request is formatted according to the Lightweight Directory Access Protocol.

5. The method of claim 1, wherein the first request includes additional optimization technique identifiers.

6. A method comprising:

receiving in a directory server a request to modify a directory, wherein the request is received from a Directory Services Markup Language (DSML) server, and wherein the DSML server selected the directory server based on an optimization technique associated with an optimization technique identifier included in a DSML request;

modifying the directory; and

transmitting a response to the DSML server, wherein the response indicates success of failure of the modification.

7. The method of claim 6, wherein the request is formatted according to the Lightweight Directory Access Protocol.

8. The method of claim 6, wherein the request is formatted according to the Lightweight Directory Access Protocol.

9. The method of claim 6, wherein the request is formatted according to the DSML.

10. The method of claim 6, wherein the optimization technique is selected from the set consisting of: closest to caller, closest to principal or object, and closest to dynamic object X.

11. A method comprising:

creating a first transaction request, wherein the first transaction request includes, an optimization technique identifier for determining to which one of a plurality of multi-master servers a second transaction request is transmitted;

transmitting the first transaction request to an intermediate server.

12. The method of claim 11, wherein the first transaction request includes Directory Services Markup Language code.

13. The method of claim 11, wherein the first transaction request includes a Simple Object Access Protocol (SOAP) comment, and wherein the SOAP comment includes the optimization technique identifier.

14. The method of claim 11, wherein the second transaction request is formatted according to the Lightweight Directory Access Protocol.

15. A method comprising:

selecting a first one of a set of geographically distributed multi-master data stores based on proximity of the first one to a first principal, a first object, or a first caller; and

transmitting a first write request to the first one of the set of geographically distributed multi-master data stores.

16. The method of claim 15, wherein each of the set includes a directory server.

17. The method of claim 15, wherein the first principal is a computer user.

18. The method of claim 15, wherein the first object is a computer.

19. The method of claim 15, wherein the first caller is remote application user.

20. The method of claim 15 further comprising:

selecting a second one of the set based on proximity of the second one to a second principal, a second object, or a second caller; and

transmitting a second write request to the second one of the set.

21. A method comprising:

receiving a DSML request, wherein the DSML request includes,

an optimization technique identifier; and

a first set of one or more directory server write requests;

creating a second set of one or more LDAP requests, wherein each of the LDAP requests includes at least one of the directory server write requests;

determining to which of a third set of geographically distributed multi-master directory servers the LDAP requests will be transmitted, wherein the determining includes using an optimization technique associated with the optimization technique identifier, and wherein the optimization technique selects those of the third set of multi-master servers based on a network location of one or more principals and one or more objects; and

transmitting ones of the second set of LDAP requests to ones of the third set of multi-master servers.

22. The method of claim 21, wherein the DSML request includes a secondary optimization technique identifier.

23. The method of claim 21, wherein the optimization technique identifier is located in a SOAP comment.

24. The method of claim 21, wherein the network location of the one or more principals and the one or more objects is determined using one or more of a set of network location services.

25. The method of claim 21, wherein the set of network location services include Session Initiation Protocol (SIP), Domain Name System (DNS), and Internet Locator Service (ILS).

26. A system comprising:

a processor;

a dynamic random access memory unit;

a machine readable medium including instructions for performing the following operations,

receiving in a directory server a request to modify a directory, wherein the request is received from a Directory Services Markup Language (DSML) server, and wherein the DSML server selected the directory server based on an optimization technique associated with an optimization technique identifier included in a DSML request;

modifying the directory; and

transmitting a response to the DSML server, wherein the response indicates success of failure of the modification.

27. The method of claim 26, wherein the request is formatted according to the Lightweight Directory Access Protocol.

28. The method of claim 26, wherein the second request is formatted according to the Lightweight Directory Access Protocol.

29. The method of claim 26, wherein the optimization technique is selected from the set consisting of: closest to caller, closest to principal or object, and closest to dynamic object X.

30. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

receiving a first request to perform a write operation on one of a plurality of multi-master data stores, wherein the one of the plurality of multi-

master data stores is undetermined, and wherein the first request includes an optimization technique identifier;

creating a second request, wherein the second request requests performance of the write operation;

determining the one of the plurality of multi-master data stores to which the second request will be transmitted, and wherein the determining includes using an optimization technique associated with the optimization technique identifier; and

transmitting the second request to the one of the plurality of multi-master data stores.

31. The machine-readable medium of claim 30, wherein each of the plurality of multi-master data stores is a directory server.

32. The machine-readable medium of claim 30, wherein the first request includes code of the Directory Services Markup Language.

33. The machine-readable medium of claim 30, wherein the second request is formatted according to the Lightweight Directory Access Protocol.

34. The machine-readable medium of claim 30, wherein the first request includes additional optimization technique identifiers.

35. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

receiving in a directory server a request to modify a directory, wherein the request is received from a Directory Services Markup Language (DSML) server, and wherein the DSML server selected the directory server based on an optimization technique associated with an optimization technique identifier included in a DSML request;

modifying the directory; and

transmitting a response to the DSML server, wherein the response indicates success of failure of the modification.

36. The machine-readable medium of claim 35, wherein the request is formatted according to the Lightweight Directory Access Protocol.

37. The machine-readable medium of claim 35, wherein the request is formatted according to the Lightweight Directory Access Protocol.

38. The machine-readable medium of claim 35, wherein the request is formatted according to the DSML.

39. The machine-readable medium of claim 35, wherein the optimization technique is selected from the set consisting of: closest to caller, closest to principal or object, and closest to dynamic object X.

40. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

creating a first transaction request, wherein the first transaction request includes, an optimization technique identifier for determining to which one of a plurality of multi-master servers a second transaction request is transmitted;

transmitting the first transaction request to an intermediate server.

41. The machine-readable medium of claim 40, wherein the first transaction request includes Directory Services Markup Language code.

42. The machine-readable medium of claim 40, wherein the first transaction request includes a Simple Object Access Protocol (SOAP) comment, and wherein the SOAP comment includes the optimization technique identifier.

43. The machine-readable medium of claim 40, wherein the second transaction request is formatted according to the Lightweight Directory Access Protocol.

44. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

selecting a first one of a set of geographically distributed multi-master data stores based on proximity of the first one to a first principal, a first object, or a first caller; and

transmitting a first write request to the first one of the set of geographically distributed multi-master data stores.

45. The machine-readable medium of claim 44, wherein each of the set includes a directory server.

46. The machine-readable medium of claim 44, wherein the first principal is a computer user.

47. The machine-readable medium of claim 44, wherein the first object is a computer.

48. The machine-readable medium of claim 44, wherein the first caller is remote application user.

49. The machine-readable medium of claim 44 further comprising:

selecting a second one of the set based on proximity of the second one to a second principal, a second object, or a second caller; and

transmitting a second write request to the second one of the set.

50. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

receiving a DSML request, wherein the DSML request includes,

an optimization technique identifier; and

a first set of one or more directory server write requests;

creating a second set of one or more LDAP requests, wherein each of the LDAP requests includes at least one of the directory server write requests;

determining to which of a third set of geographically distributed multi-master directory servers the LDAP requests will be transmitted, wherein the determining includes using an optimization technique associated with the optimization technique identifier, and wherein the optimization technique selects those of the third set of multi-master servers based on a network location of one or more principals and one or more objects; and

transmitting ones of the second set of LDAP requests to ones of the third set of multi-master servers.

51. The machine-readable medium of claim 50, wherein the DSML request includes a secondary optimization technique identifier.

52. The machine-readable medium of claim 50, wherein the optimization technique identifier is located in a SOAP comment.

53. The machine-readable medium of claim 50, wherein the network location of the one or more principals and the one or more objects is determined using one or more of a set of network location services.

54. The machine-readable medium of claim 50, wherein the set of network location services include Session Initiation Protocol (SIP), Domain Name System (DNS), and Internet Locator Service (ILS).